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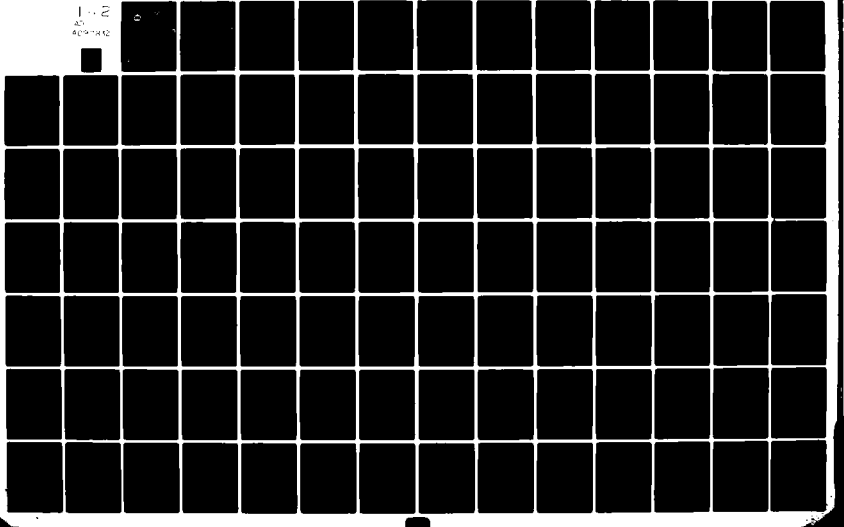

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20. ABSTRACT

This is the Soviet Laser Bibliography for March-April 1980, and is No. 46 in a continuing series on Soviet laser developments. The coverage includes basic research on solid state, liquid, gas, and chemical lasers; components; nonlinear optics; spectroscopy of laser materials; ultrashort pulse generation; crystal growing; theoretical aspects of advanced lasers; and general laser theory. Laser applications are listed under biological effects; communications; beam propagation; computer technology; holography; laser-induced chemical reactions; measurement of laser parameters; laser measurement applications; laser-excited optical effects; laser spectroscopy; beam-target interaction; and plasma generation and diagnostics.

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Introduction

This bibliography has been compiled under an interagency agreement as a continuing effort to document current Soviet-bloc developments in the quantum electronics field. The period covered is March-April 1980, and includes all significant laser-related articles received by us in that interval. The bulk of the entries come from the approximately 30 periodicals which are known to publish the most significant findings in Soviet laser technology. Citations from the Russian Reference Journals are also included. Laser items from the popular or semipopular press are generally omitted.

For convenience we have abbreviated frequently cited source names; a source abbreviations list and an author index are included. All sources cited with no parenthetical notation are available at the Library of Congress. A parenthetical entry (RZh, KL) indicates the secondary source in which the citation was found as a bibliographic entry or abstract, but for which the original source is not currently available at the Library. The authors' affiliations are indicated by the numbers in parentheses following the authors' names in the text and are listed in the Author Affiliations List. New affiliations are assigned a new number and are added to a cumulative list which includes all affiliations from 1969 to the present. Only those affiliations which appear in this issue are listed in this issue's Author Affiliations List.

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II. LASER APPLICATIONS

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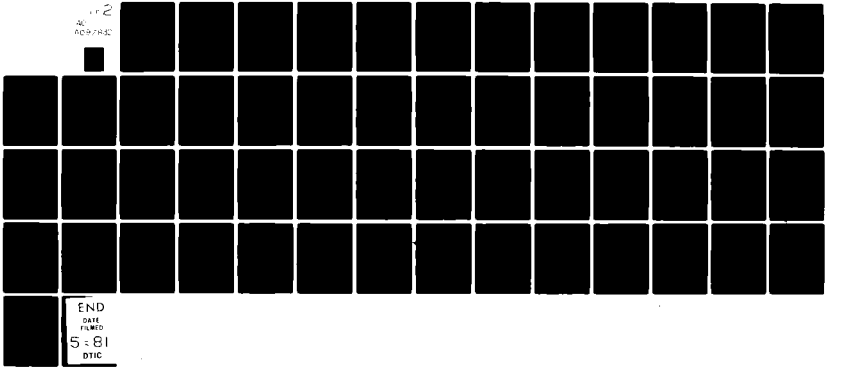

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IV. SOURCE ABBREVIATIONS

	(CIRC Codens)	
DAN B	(DBLRA)	Akademiya nauk Belorusskoy SSR. Doklady
DAN SSSR	(DANKA)	Akademiya nauk SSSR. Doklady
DAN Ukr	(DUKAB)	Akademiya nauk Ukrayins'koyi RSR. Dopovidi. Seriya A. Fizyko-matematychni ta tekhnichni nauky
Elek	(EKNTB)	Elektronika [Poland]
EOM	(EOBMA)	Elektronnaya obrabotka materialov
ETP	(EXPPA)	Experimentelle Technik der Physik
FAiO	(IFAOA)	Akademiya nauk SSSR. Izvestiya. Fizika atmosfery i okeana
FGiV	(FGVZA)	Fizika goreniya i vzryva
FiKhOM	(FKOMA)	Fizika i khimiya obrabotka materialov
FTP	(FTPPA)	Fizika i tekhnika poluprovodnikov
FTT	(FTVTA)	Fizika tverdogo tela
IAN B	(VABFA)	Akademiya nauk Belorusskoy SSR. Izvestiya. Seriya fiziko-matematicheskikh nauk
IAN Est	(ETFMB)	Akademiya nauk Estonskoy SSR. Izvestiya. Fizika, matematika
IAN Fiz	(IANFA)	Akademiya nauk SSSR. Izvestiya. Seriya fizicheskiya
IAN M	(IZFMB)	Akademiya nauk Moldavskoy SSR. Izvestiya. Seriya fiziko-tekhnicheskikh i matematicheskikh nauk
IAN Uz	(IUZFA)	Akademiya nauk Uzbekskoy SSR. Izvestiya. Seriya fiziko-matematicheskikh nauk
I-FZh	(INFZA)	Inzhenerno-fizicheskiy zhurnal
IT	(IZTEA)	Izmeritel'naya tekhnika
IVUZ Fiz	(IVUFA)	Izvestiya vysshikh uchebnykh zavedeniy. Fizika
IVUZ Priboro	(IVUBA)	Izvestiya vysshikh uchebnykh zavedeniy. Priborostroyeniye
IVUZ Radioelektr	(IVUZB)	Izvestiya vysshikh uchebnykh zavedeniy. Radioelektronika
IVUZ Radiofiz	(IVYRA)	Izvestiya vysshikh zavedeniy. Radiofizika

JTP	(JTPHD)	Journal of Technical Physics [Poland]
KE	(KVEKA)	Kvantovaya elektronika
KiK	(KNKTA)	Kinetika i kataliz
KL	(KNLTA)	Knizhnaya letopis'
KLDV	(KLDVA)	Knizhnaya letopis'. Dopolnitel'nyy vypusk
Kristal	(KRISA)	Kristallografiya
Lit fiz sb	(LFSBA)	Litovskiy fizicheskiy sbornik
MiTOM	(MTOMA)	Metallovedeniye i termicheskaya obrabotka materialov
MZhiG	(IMZGA)	Akademiya nauk SSSR. Izvestiya. Mekhanika zhidkosti i gaza
NM	(IVNMA)	Akademiya nauk SSSR. Izvestiya. Neorganicheskiye materialy
OiS	(OPSPA)	Optika i spektroskopiya
OMP	(OPMPA)	Optiko-mekhanicheskaya promyshlennost'
Opt app	(OPAPB)	Optica applicata [Poland]
Otkr izobr	(OIPOV)	Otkrytiya, izobreteniya, promyshlennyye obraztsy, tovarnyye znaki
PSS	(PSSAB) (PSSBB)	Physica Status Solidi (A). Applied Research Physica Status Solidi (B). Basic Research
PSU	(PRSUB)	Pribory i sistemy upravleniya
PTE	(PRTEA)	Pribory i tekhnika eksperimenta
RiE	(RAELA)	Radiotekhnika i elektronika
RRP	(RRPQA)	Revue roumaine de physique
RZhF	(RZFZA)	Referativnyy zhurnal. Fizika
RZhGeofiz	(GZGFA)	Referativnyy zhurnal. Geofizika
GZhMekh	(RZMKA)	Referativnyy zhurnal. Mekhanika
RZhRadiot	(RZRAB)	Referativnyy zhurnal. Radiotekhnika
Sb1	Sbornik	Yerevanskiy politekhnicheskiy institut. Mezhvuznyy sbornik nauchnykh trudov. Radiotekhnika i elektronika, no. 3, 1978.
Sb2		Problemy sovremennoy optiki i spektroskopii. Institut fiziki AN BSSR. Minsk, Nauka i tekhnika, 1979.

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Sb22		Vsesoyuznaya konferentsiya po metody fotouprugosti. 8th. Tallin, 1979, Materialy, v. 3. Tallin, 1979.
Sb23		Polucheniye i svoystva tonkikh plenok. Kiyev, 1979.
Sb24		Zimnaya shkola LIYaF [Leningradskiy institut yadernoy fiziki]. 14th. Materialy. Fizika atomnogo yadra. Leningrad, 1979.
Sb25		Elektronnyye i ionnyye protsessy v tverdykh telakh, no. 10. Radiatsionno-termicheskiye izmeneniya struktury kristallicheskoy reshetki. Tbilisi, Metsniyereba, 1979.
Sb26		Khimiya tverdogo tela, no. 3, Sverdlovsk, 1979.
Sb27		Fizika elektroniki, no. 19, L'vov, 1979.
Sb28		Voprosy atomnoy nauki i tekhniki. Termoyadernyy sintez, no. 2/4, Moskva, 1979.
SCF	(SCEFA)	Studii si cercetari de fizica
TKiT	(TKTEA)	Tekhnika kino i televedeniya
Tr1	Trudy	Moskovskiy energeticheskiy institut. Trudy, no. 429, 1979.
Tr2		Leningradskiy politekhnicheskiy institut. Trudy, no. 366, 1979.
Tr3		VNI kinofotoinstitut. Trudy, no. 98, 1979.
Tr4		Fizicheskiy institut AN SSSR. Trudy, no. 125, 1980.
Tr5		Moskovskiy fiziko-tekhnicheskiy institut. Trudy, no. 11, 1979.
Tr6		Severo-Kavkazskiy nauchnyy tsentr vysshey shkoly. Izvestiya. Yestestvennyye nauki, no. 4, 1979.
Tr7		Moskovskiy energeticheskiy isstitut. Trudy, no. 426, 1979.
Tr8		Moskovskiy energeticheskiy isntitut. Trudy, no. 401, 1979.
Tr9		Trudy uchebnykh institutov svyazi. Vychislitel'naya tekhnika v sistemakh svyazi. Leningrad, 1979.
Tr10		Moskovskoye vyssheye tekhnicheskoye uchilishche. Trudy, no. 305, 1979.
Tr11		Glavnaya geofizicheskaya observatoriya. Trudy, no. 419, 1980.
Tr12		Leningradskiy elektrotekhnicheskiy institut. Izvestiya, no. 247, 1979.

Tr13		Leningradskiy elektrotekhnicheskiy institut. Izvestiya, no. 245, 1979.
Tr14		VNII fiziko-tekhnicheskikh i radiotekhnicheskikh izmereniy. Trudy, no. 40/70, 1979.
Tr15		TsNII geodezii, aeros"yemki i kartografii. Trudy, no. 221, 1979.
Tr16		Radiotekhnicheskiy institut AN SSSR. Trudy, no. 33, 1978.
TVT	(TVTYA)	Teplofizika vysokikh temperatur
UFN	(UFNAA)	Uspekhi fizicheskikh nauk
UFZh	(UFIZA)	Ukrainskiy fizicheskiy zhurnal
VBU	(VBMFA)	Belorusskiy universitet. Vestnik. Seriya 1. Matematika, fizika, mekhanika
VMU	(VMUFA)	Moskovskiy universitet. Vestnik. Fizika, astronomiya
ZhETF	(ZEIFA)	Zhurnal eksperimental'noy i teoreticheskoy fiziki
ZhETF P	(ZFPRA)	Pis'ma v Zhurnal eksperimental'noy i teoreticheskoy fiziki
ZhNiPFiK	(ZNPFA)	Zhurnal nauchnoy i prikladnoy fotografii i kinematografii
ZhPMTF	(ZPMFA)	Zhurnal prikladnoy mekhaniki i tekhnicheskoy fiziki
ZhPS	(ZPSBA)	Zhurnal prikladnoy spektroskopii
ZhTF	(ZTEFA)	Zhurnal tekhnicheskoy fiziki
ZhTF P	(PZTFD)	Pis'ma v Zhurnal tekhnicheskoy fiziki

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